

**AMENDMENTS TO THE CLAIMS**

In the set of claims within the Application, please amend claims 1-17, cancel claims 18-20, and add new claims 21 and 22 as hereinafter indicated.

1. (Currently Amended) An object relative status determination system for [[a]] at least one vehicle, said system comprising:

at least one orthogonal frequency domain modulation (OFDM) transceiver ~~generating a plurality of~~ operable to transmit and receive object range signals onboard a host vehicle; and

at least one controller coupled to said at least one OFDM transceiver and determining operable to determine object information relative to [[the]] said host vehicle in response to said ~~plurality of~~ object range signals.

2. (Currently Amended) [[A]] An object relative status determination system as in claim 1, wherein said at least one controller is coupled to a vehicle network interface via said at least one OFDM transceiver.

3. (Currently Amended) [[A]] An object relative status determination system as in claim 2, wherein said ~~vehicle network~~ system comprises:

a head vehicle having at least one onboard OFDM transceiver and at least one controller coupled thereto;

at least one middle vehicle having at least one onboard OFDM transceiver and at least one controller coupled thereto; and

a tail vehicle having at least one onboard OFDM transceiver and at least one controller coupled thereto;

wherein said at least one controller of said head vehicle is coupled to said vehicle network interface via said at least one onboard OFDM transceiver of said head vehicle, said at least one controller of each said middle vehicle is coupled to said vehicle network interface via said at least one onboard OFDM transceiver of each said middle vehicle, and said at least one controller of said tail vehicle is coupled to said vehicle network interface via said at least one onboard OFDM transceiver of said tail vehicle;

wherein said head vehicle, said at least one middle vehicle, and said tail vehicle are collectively in a platoon formation; and

wherein said host vehicle is one of said head vehicle, said at least one middle vehicle, or said tail vehicle of said platoon formation.

4. (Currently Amended) An object relative status determination system for at least one vehicle, said system comprising:

at least one OFDM transceiver ~~generating at least one~~ operable to transmit and receive object range signal signals;

at least one global navigation positioning system (GNS) (GPS) ~~receiving at least one~~ operable to receive satellite range signal signals; and

at least one controller coupled to said at least one OFDM transceiver and said at least one GPS and determining operable to determine object information relative to a host vehicle in response to said ~~at least one~~ satellite range signal signals and said ~~at least one~~ object range signal signals.

5. (Currently Amended) ~~[[A]]~~ An object relative status determination system as in claim 4, wherein said at least one OFDM transceiver ~~comprises~~ particularly includes:

a first OFDM transceiver ~~coupled within~~ onboard said host vehicle ~~and generating a first~~ object range signal; and

a second OFDM transceiver ~~coupled within the~~ on an object ~~and generating a second~~ object range signal.

6. (Currently Amended) ~~[[A]]~~ An object relative status determination system as in claim 4, wherein said at least one GNS ~~comprises~~ GPS particularly includes:

a first GPS ~~coupled within~~ onboard said host vehicle ~~and receiving a first set of satellite~~ range signals; and

a second GPS ~~coupled within~~ on an object ~~and receiving a second set of satellite~~ range signals.

7. (Currently Amended) ~~[[A]]~~ An object relative status determination system as in claim 4, wherein said at least one controller ~~determines~~ is particularly operable to determine the

relative range of at least one object with respect to said host vehicle in response to said ~~at least one~~ satellite range signal signals and said ~~at least one~~ object range signal signals.

8. (Currently Amended) [[A]] An object relative status determination system as in claim 4, wherein said at least one controller determines is particularly operable to determine the relative velocity of at least one object with respect to said host vehicle in response to said at least one satellite range signal signals and said at least one object range signal signals.

9. (Currently Amended) [[A]] An object relative status determination system as in claim 4, wherein each of said at least one GNS ~~comprises~~ GPS includes:

~~at least one a~~ a GPS antenna;

~~at least one a~~ a radio frequency (RF) unit coupled to said GPS antenna; and

~~at least one a~~ a digital signal processor (DSP) coupled between said RF unit and said at least one controller.

10. (Currently Amended) [[A]] An object relative status determination system as in claim 4, wherein said at least one controller is coupled to a vehicle network interface.

11. (Currently Amended) [[A]] An object relative status determination system as in claim 10, wherein:

~~said vehicle network system further~~ comprises a platoon of vehicles on which said at least one OFDM transceiver, said at least one GPS, and said at least one controller is carried;  
and

said host vehicle is one of said platoon of vehicles.

12. (Currently Amended) [[A]] An object relative status determination system as in claim 4, wherein said at least one GNS ~~receives a plurality of~~ GPS is particularly operable to receive said satellite range signals from a plurality of satellites.

13. (Currently Amended) [[A]] An object relative status determination system as in claim 4, wherein said at least one GNS ~~receives~~ GPS is particularly operable to receive said at least one satellite range signal signals from at least one GPS satellite.

14. (Currently Amended) [[A]] An object relative status determination system as in claim 4, wherein said at least one ~~GNS-receives~~ GPS is particularly operable to receive said at least ~~one~~ satellite range signal signals from at least one navy navigation satellite system (NAVSAT) satellite.

15. (Currently Amended) [[A]] An object relative status determination system as in claim 4, wherein said at least one controller ~~determines~~ is particularly operable to determine said object information relative to said host vehicle in response to a single one of said satellite range signal signals and a single one of said object range signal signals.

16. (Currently Amended) [[A]] An object relative status determination system as in claim 4, wherein said at least one controller ~~determines~~ is particularly operable to determine said object information relative to said host vehicle in response to a plurality of said object range signals.

17. (Currently Amended) [[A]] An object relative status determination system as in claim 4, wherein said at least one OFDM ~~transceivers comprise~~ transceiver particularly includes:  
a first OFDM transceiver ~~coupled within~~ onboard said host vehicle; and  
a second OFDM transceiver ~~coupled within~~ on an object and in synchronization with said first OFDM transceiver.

18. (Cancelled)

19. (Cancelled)

20. (Cancelled)

21. (New) A system comprising:  
a host vehicle;  
an orthogonal frequency domain modulation (OFDM) transceiver onboard said host vehicle;

a global positioning system (GPS) unit onboard said host vehicle;  
at least one collision countermeasure onboard said host vehicle; and  
a controller coupled to said OFDM transceiver, said GPS unit, and said at least one collision countermeasure onboard said host vehicle;  
wherein said OFDM transceiver is operable to transmit and receive range signals to and from at least one object having a reciprocal transceiver;  
wherein said GPS unit is operable to receive range signals from at least one satellite that is wirelessly linked to said at least one object;  
wherein said controller is operable to process said range signals and thereby determine the range of said at least one object relative to said host vehicle; and  
wherein said controller is operable to selectively control said at least one collision countermeasure according to said range as determined.

22. (New) A system as in claim 21, wherein each said object is a separate vehicle having its own respective OFDM transceiver, GPS unit, and controller.